This listing of the claims replaces all prior versions in the application.

Listing of Claims:

Please amend the claims as follows:

1. (Currently Amended) A method for treating food traveling through a food processor, comprising:

moving at least one food item over a predetermined travel path in a food processor having a food travel pathway comprising a moving floor and upwardly extending first and second sidewalls located on opposing sides thereof, the travel pathway having corresponding first and second side portions;

introducing exogenous fluid into the food processor from a plurality of inlet ports positioned proximate the first side portion of the travel pathway during the moving step to thereby treat the food item;

exhausting fluid from the food processor from a plurality of exhaust ports positioned proximate the second side portion of the travel pathway; and

directing the exogenous fluid to travel from the first side portion to the second side portion over the food held on the food item travel pathway.

2. (Currently Amended) A method according to Claim 1, wherein the food processor includes a plurality of vertically stacked tiers each having a portion of the food travel path thereon, each of the vertically stacked tiers being longitudinally spaced apart a desired distance from the other tiers, and wherein the moving step is carried out by advancing the food item along the travel pathway so that it travels successively over a plurality of different tiers.

3. (Original) A method according to Claim 2, wherein the fluid comprises gas as a major constituent, and wherein the moving step is carried out such that the food item travels substantially continuously greater than one revolution in a first tier before it moves to the next selected tier.

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4. (Original) A method according to Claim 3, wherein the exogenous fluid comprises thermally treated air in at least one tier, and wherein each tier is configured with a plurality of travel perimeter paths thereon, each of the travel perimeter paths forming a serial portion of the predetermined travel path so as to direct the at least one food item to travel a predetermined distance about a major portion of a first perimeter path and then alter its travel path on the respective tier to travel a predetermined distance about a major portion of a second perimeter path, wherein the second perimeter path is different from the first perimeter path.

5. (Original) A method according to Claim 4, wherein the first perimeter path surrounds a major portion of the second perimeter path.

6. (Original) A method according to Claim 5, wherein the second perimeter path surrounds a major portion of the first perimeter path.

7. (Original) A method according to Claim 5, wherein the first and second perimeter paths are spaced in side-by-side alignment.

8. (Original) A method according to Claim 5, wherein the first and second perimeter paths are substantially coplanar when viewed from the side.

9. (Original) A method according to Claim 2, wherein the predetermined travel path includes a plurality of transfer regions, a respective one for each tier, which allows the at least one food item to move to the next selected tier.

10. (Original) A method according to Claim 2, wherein each tier defines a portion of the predetermined travel path, and wherein each tier comprises at least one conveyor that defines at least a portion of the moving floor.

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11. (Currently Amended) A method according to Claim 9, wherein ~~a~~ the plurality of tiers have a substantially circular predetermined travel path.

12. (Original) A method according to Claim 2, further comprising alternating the lateral travel pattern of the at least one food item as it moves between adjacent tiers such that the food item travels from an inside to an outside perimeter on a first tier and then an outside to an inside perimeter on an adjacent tier.

13. (Original) A method according to Claim 3, wherein each tier has a desired air temperature associated therewith, and wherein the moving step employs at least one conveyor on each tier and the at least one food item is exposed to the tier temperature for a time corresponding to the conveyor speed as it travels through that tier.

14. (Original) A method according to Claim 1, wherein the at least one food item is an elongated food item.

15. (Original) A method according to Claim 1, wherein the at least one food item is an elongated meat product having a length of at least about 20 feet.

16. (Original) A method according to Claim 1, wherein the fluid is a gas mixture, and the method further comprises the steps of:

arranging the plurality of inlet ports so that they are spatially horizontally spaced apart about the first side portion of the food travel path; and

arranging the plurality of exhaust ports so that they are spatially horizontally spaced apart about the second side portion of the food travel path.

17. (Original) A method according to Claim 16, further comprising configuring the exhaust ports, in number and/or size, so that they present a cumulative cross-sectional area

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that is substantially equal to or greater than that of the cumulative cross-sectional area of the inlet ports.

18. (Original) A method according to Claim 16, further comprising configuring the exhaust ports so that they present a cumulative cross-sectional area that is less than that of the cumulative cross-sectional area of the inlet ports;

monitoring the internal pressure in the food processor for predetermined pressure levels; and

controllably discharging exhaust gas through a pressure relief valve at selected detected pressure conditions responsive to the monitoring step.

19. (Original) A method according to Claim 16, wherein the number of inlet ports are greater than the number of exhaust ports.

20. (Original) A method according to Claim 19, wherein the exhaust ports have a larger cross-sectional area than the inlet ports.

21. (Original) A method according to Claim 2, wherein the fluid comprises a gas mixture, said method further comprising positioning primary upwardly extending inlet and exhaust ducts in the food processor to distribute the exogenous supply of gas mixture proximate each tier.

22. (Original) A method according to Claim 21, further comprising positioning secondary inlet ducts that comprise laterally extending arms in fluid communication with the primary duct about at least one tier to facilitate air distribution.

23. (Original) A method according to Claim 21, further comprising positioning secondary exhaust ducts that comprise laterally extending arms in fluid communication with the primary duct about at least one tier to facilitate gas distribution.

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24. (Original) A method according to Claim 21, wherein the primary inlet duct and the primary exhaust duct are disposed on the same side of the food travel path and gas is directed to exhaust from the other side of the food travel path.

25. (Original) A method according to Claim 21, wherein the primary inlet duct and the primary exhaust duct are disposed on the same side of the food travel path and gas is directed to be introduced to the food from the other side of the food travel path.

26. (Original) A method according to Claim 23, wherein the primary inlet duct and the primary exhaust duct are disposed on opposing sides of the food travel path.

27. (Original) A method according to Claim 2, wherein the exogenous fluid comprises thermally treated air, and wherein the food processor comprises an inner column of tiers and an outer column of tiers, each column defining a separate travel path for a desired at least one food item, and wherein the outer tier is configured to encase the inner tier so that each of the inner and outer column of tiers has its own first and second upwardly extending sidewalls and food travel path, and wherein the steps of moving the food, introducing the exogenous fluid, exhausting, directing the gas, and treating the food can be selectively carried out in each of the inner and outer columns of tiers.

28. (Original) A method according to Claim 27, wherein different food items are concurrently directed to travel independently through the inner and outer column of tiers.

29. (Currently Amended) A method according to Claim ~~22~~ 27, wherein the inner column of tiers comprises an inner oven and the outer column of tiers comprises an outer oven, and wherein each of the inner and outer column of tiers at each tier level are separately regulated for desired operating environments by the steps of introducing and exhausting.

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30. (Original) A method according to Claim 28, wherein the at least one food item is an elongated meat product having a length which extends over a major portion of the predetermined travel path.

31. (Currently Amended) A food processing apparatus with forced gas distribution systems comprising:

a housing defining an enclosure and having a food inlet and a food outlet; and

a plurality of stacked tiers residing in said housing, one or more tiers defining a treatment zone within the food processing apparatus, each of said tiers comprising a moving floor that moves the food along its desired travel path over a primary surface of a respective tier; and

a forced gas distribution system in fluid communication with the stacked tiers, the system comprising:

a first plurality of inlet ports positioned on a first side portion of the food travel path proximate each tier;

a second plurality of exhaust ports positioned on a second side portion of the food travel path across from the plurality of inlet ports proximate each tier; and

an exogenous supply of gas operably associated with the inlet ports,

wherein, in operation, the gas flows over the food in each tier as the food is substantially moving through a treatment zone.

32. (Original) A system according to Claim 31, wherein the exogenous gas comprises air, and wherein the tiers are configured to substantially continuously move the food, and wherein the moving floor on each tier includes at least one conveyor.

33. (Original) A system according to Claim 31, wherein the second plurality of exhaust ports is less than the first plurality of inlet ports.

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34. (Currently Amended) A system according to Claim 31, wherein a major portion of the plurality of inlet ports are configured and held in the food processor about a the plurality of the stacked tiers so that they are spatially horizontally spaced apart about the first side portion of the food travel path, and wherein a major portion of the plurality of exhaust ports are configured and held in the food processor so that they are spatially horizontally spaced apart about the second side portion of the food travel path.

35. (Original) A system according to Claim 31, wherein the exhaust ports are configured so that they have a cumulative cross-sectional area that is greater than that of the cumulative cross-sectional area of the inlet ports.

36. (Original) A system according to Claim 31, wherein said forced gas distribution system comprises a pressure relief valve that is configured to release gas from the food processor upon the detection of elevated pressure levels, and wherein the exhaust ports are configured so that they present a cumulative cross-sectional area that is less than that of the cumulative cross-sectional area of the inlet ports.

37. (Original) A system according to Claim 31, wherein the exhaust ports are configured so that they have a cumulative cross-sectional area that is substantially equal to that of the cumulative cross-sectional area of the inlet ports.

38. (Original) A system according to Claim 31, further comprising at least one primary upwardly extending inlet duct and at least one primary upwardly extending exhaust duct held within the food processor in fluid communication with the inlet and exhaust ports, respectively, so as to distribute the exogenous gas proximate each tier.

39. (Original) A system according to Claim 38, further comprising at least one secondary inlet duct located at least about selected ones of the tiers, the secondary duct

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comprising laterally extending arms and being in fluid communication with a selected one of the primary ducts to facilitate gas distribution.

40. (Original) A system according to Claim 38, wherein the exogenous gas comprises thermally treated air, said system further comprising a plurality of secondary exhaust ducts in fluid communication with the primary exhaust duct, and a plurality of secondary inlet ducts in fluid communication with the primary inlet duct, wherein at least one of the secondary ducts comprises laterally extending arms that span the distance associated with the width of the travel path about at least one tier to thereby facilitate air distribution.

41. (Original) A system according to Claim 40, wherein the primary inlet duct and the primary exhaust duct are disposed on the same side of the food travel path, and a plurality of secondary exhaust ducts have laterally extending arms so that, in operation, air is directed to enter the exhaust from the side of the food travel path opposite the primary exhaust duct.

42. (Currently Amended) A system according to Claim 40, wherein the primary inlet duct and the primary exhaust duct are located on the same side of the food travel path, and a plurality of secondary inlet ducts have laterally extending arms so that, in operation, air is directed to flow across the food starting ~~the~~ from the side of the food travel path opposite the primary inlet duct.

43. (Currently Amended) A system according to Claim 38, wherein the ~~wherein the~~ primary inlet duct and the primary exhaust duct are disposed on opposing sides of the food travel path.

44. (Original) A system according to Claim 38, wherein each tier includes a portion of the food travel path, and wherein the portion of the travel path is configured to define a substantially circular track.

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45. (Original) A system according to Claim 31, wherein the system is configured to process an elongated food product having a length of at least about 20 feet therein.

46. (Original) A system according to Claim 31, wherein the system is configured to process a meat product.

47. (Original) A system according to Claim 31, wherein the system is configured to process a vegetable product.

48. (Original) A system according to Claim 31, wherein the system is configured to process a fruit product.

49. (Original) A system according to Claim 31, wherein the system is configured to process a dough, bread, or baked product.

50. (Original) A system according to Claim 31, wherein the system is configured to process a dairy product.

51. (Original) A system according to Claim 31, wherein the system is configured to process a product in a container having a gelatinous or liquid form that transitions to a solid or semi-solid form in the processor as a result of the treatment administered therein.

52. (Original) A system according to Claim 31, wherein the system is configured to process at least two of a meat product, a vegetable product, a fruit product, a dairy product, a confection product, a dough product.

53. (Original) An apparatus according to Claim 44, wherein the moving floors comprise at least one conveyor that is configured to direct the food product to travel greater than about 1.25 revolutions about a respective tier before moving to the next desired tier.

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54. (Original) An apparatus according to Claim 38, wherein at least one tier has a segmented portion that is substantially fluidly isolated from the remaining portion of that tier so that, during operation, a different processing environment can be selectably introduced therein relative to the remaining portion of that tier.

55. (Currently Amended) A nested food processing apparatus, comprising:

(a) an outer processor having spaced apart inner and outer walls defining an enclosure therebetween and a food inlet and food outlet, said outer processor comprising:

a plurality of vertically stacked tiers held within the enclosure;

at least one conveyor operably associated with each tier, the at least one conveyor being configured to move a food item about the tier such that the food item travels greater than one revolution in each tier;

transfer means operably associated with the tiers for directing the food item to travel to the next selected tier; and

a gas distribution system, comprising:

an exogenous supply of gas or gas mixture;

a first plurality of spaced apart inlet ports positioned in the processing apparatus proximate to each tier about a selected one of the inner or outer walls in fluid communication with the exogenous supply of gas or gas mixture;

a second plurality of spaced apart exhaust ports positioned in the processing apparatus proximate to each tier about a different one of the walls selected to locate the ~~air~~ inlet ports, wherein the second plurality is less than the first plurality;

wherein the ~~air~~ gas distribution system is configured to continuously distribute the gas or gas mixture while food item is moving through each tier; and

(b) an inner processor defining an enclosure having associated upwardly extending sidewalls and a food inlet and a food outlet, wherein said outer processor is configured to receive and surround said inner processor, wherein each of said inner and outer processors are

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configured to provide separately regulated operating environments, said inner processor comprising:

a plurality of vertically stacked tiers held within the inner processor enclosure;

at least one conveyor operably associated with each tier, the at least one conveyor being configured to move a food item about the tier such that the food item travels greater than one revolution in each tier;

transfer means operably associated with the at least one conveyor for directing the food item to travel to the next selected tier; and

a gas distribution system, comprising:

an exogenous supply of gas or gas mixture;

a first plurality of spaced apart inlet ports positioned in the processing apparatus proximate to each tier about a selected one of the sidewalls in fluid communication with the exogenous supply of gas or gas mixture;

a second plurality of spaced apart exhaust ports positioned in the processing apparatus proximate to each tier about a different one of the sidewalls selected to locate the inlet ports, wherein the second plurality is less than the first plurality;

wherein the gas distribution system is configured to continuously distribute the exogenous gas or gas mixture while food item is moving through each tier.

56. (Original) A nested oven according to Claim 55, wherein the exogenous supply of gas or gas mixture comprises thermally treated air, wherein said inner and outer processors comprise portions that are ovens, wherein the processors are annularly shaped, and wherein the inner and outer ovens are coaxially aligned.

57. (Original) A nested oven according to Claim 55, wherein said at least one conveyor of said inner and outer processors comprises a single conveyor configured to define multiple revolutions on at least one tier.

58. (Currently Amended) A food processing system having at least one food processing chamber for treating food, comprising:

means for moving food through a food processing chamber having a plurality of stacked tiers each providing at least one food travel lane, as the food is held on a food support surface;

means for directing exogenously introduced air into inlet ports disposed on a first side portion of the at least one food travel lane of the respective tiers and to exit from exhaust ports located on a second opposing side portion of the at least one food travel lane of the respective tiers so as to cause the air to flow across the food held on the food support surface ~~held~~ inside the food processing chamber at each tier while the food is moving in the chamber so that the air has major lateral flow direction as the air travels in the chamber from inlet ports to respective exhaust ports; and

means for exhausting the air from the chamber while the food is moving in the chamber.

59. (New) A system according to Claim 58, wherein the system includes a plurality of exhaust ports having a cumulative cross-sectional area and a plurality of inlet ports having a cumulative cross-sectional area, the exhaust ports being configured in sufficient quantity and/or size so that the exhaust ports cumulative cross-sectional area is substantially equal to or greater than the cumulative cross-sectional area of the inlet ports.

60. (New) A system according to Claim 59, wherein the exhaust ports are configured so that they present a cumulative cross-sectional area that is less than that of cumulative cross-sectional area of the inlet ports, the system further comprising:

monitors for determining the internal pressure in the food processor; and

means for controllably discharging exhaust gas through a pressure relief valve at selected detected pressure conditions responsive to the internal pressure sensed by the monitors.

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61. (New) A system according to Claim 59, wherein the number of inlet ports are greater than the number of exhaust ports.

62. (New) A system according to Claim 59, wherein the exhaust ports have a larger cross-sectional area than the inlet ports.

63. (New) A system according to Claim 58, wherein the tiers have a plurality of side by side travel lanes, and wherein the system further comprises a plurality of elongate food items in the chamber.

64. (New) A system according to Claim 58, wherein for a respective tier, a plurality of inlet ports are positioned laterally spaced apart above the food travel lane on the first side portion of the at least one food travel lane and at least one corresponding exhaust port is positioned above the food travel lane on the second side portion of the at least one travel lane in fluid communication with the corresponding inlet ports.

65. (New) A system according to Claim 58, wherein for a respective tier, a plurality of inlet ports are positioned above the food travel lane on the first side portion of the at least one food travel lane and at least one corresponding exhaust port is positioned substantially level with the food travel lane and/or inlet ports on the second side portion of the at least one travel lane in fluid communication with the corresponding inlet ports.

66. (New) A system according to Claim 58, wherein for a respective tier, a plurality of inlet ports are positioned above the food travel lane on the first side portion of the at least one food travel lane and at least one corresponding exhaust port is positioned below the food travel lane on the second side portion of the at least one travel lane in fluid communication with the corresponding inlet ports.

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67. (New) A system according to Claim 58, wherein an air distribution plenum is configured with vertically spaced apart inlet ports disposed proximate each tier level and an air exhaust plenum with vertically spaced apart exhaust ports proximate each tier level, and wherein, the at least one food travel lane is configured to substantially continuously advance along a predetermined travel path to generate air currents in the system.

68. (New) A system according to Claim 67, wherein at least one tier is configured so that at least one of the exhaust ports pulls air therein from a plurality of the different vertically spaced inlet ports from at least two adjacent tier levels.

69. (New) A system according to Claim 58, wherein for at least one tier level, a plurality of inlet ports are spaced apart about an outer perimeter of the at least one food travel lane on the first side portion thereof and a plurality of exhaust ports are spaced apart about an inner perimeter of the at least one food travel lane, wherein the tier level has fewer exhaust ports than inlet ports.

70. (New) A system according to Claim 58, wherein the at least one travel lane comprises a plurality of side by side travel lanes, and wherein, when viewed from the top, the inlet ports and exhaust ports are offset from each other across the food travel lanes.

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